Massachusetts Ave. Corridor Project

Phase 1

Town of Arlington, Massachusetts

BOARD OF SELECTMEN MEETING

April 28, 2009

Project Overview

- Locally administered MassHighway project (State and Federally Funded)
- Cambridge Line to Pond Lane ~ 1 mile (5,300 feet)

Project Goals

- Improve safety, access, and efficiency for all users
- Improve streetscape along corridor
- Improve parking efficiency

Street Trees & Plantings

Street Furniture

Project Schedule

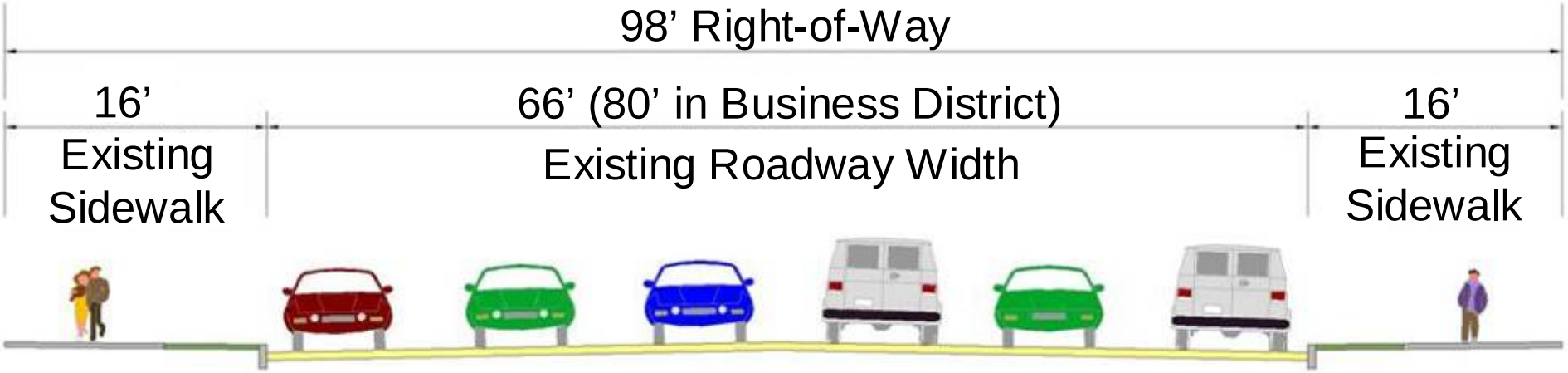
Preliminary Design (25 Percent)

- Compile Necessary Traffic Data
- Horizontal & Vertical Geometries
- Typical Cross Section (Lane Arrangements)
- Draft Traffic Signal Plans
- Preliminary Cost Estimate
- Functional Design Report

Final Design (75 Percent & 100 Percent)
PS & E (Plans, Specifications, & Estimate)
Construction Targeted for Spring 2011

Existing Conditions

Typical Section



Key Traffic Statistics

- 2004-2006 MassHighway Accident Data
  - –No fatalities, 2 pedestrians hit, 1 bicyclist hit, 38 injuries in vehicles, 1 high accident location
- Pedestrian crossing width on Mass Ave = 66 feet (typical) On average, minimum crossing takes 20 seconds to walk
- 14,000 to 17,300 vehicles use Mass Ave over a typical weekday (total both directions)
- *Historical MassHighway traffic data shows Mass Ave volumes to be relatively constant
- During Peak Hrs: 1600-1800 vehicles, 220 to 350 cyclists, & over 350 pedestrians enter Mass Ave study area intersections

Signalized Intersections

Existing vs. Build

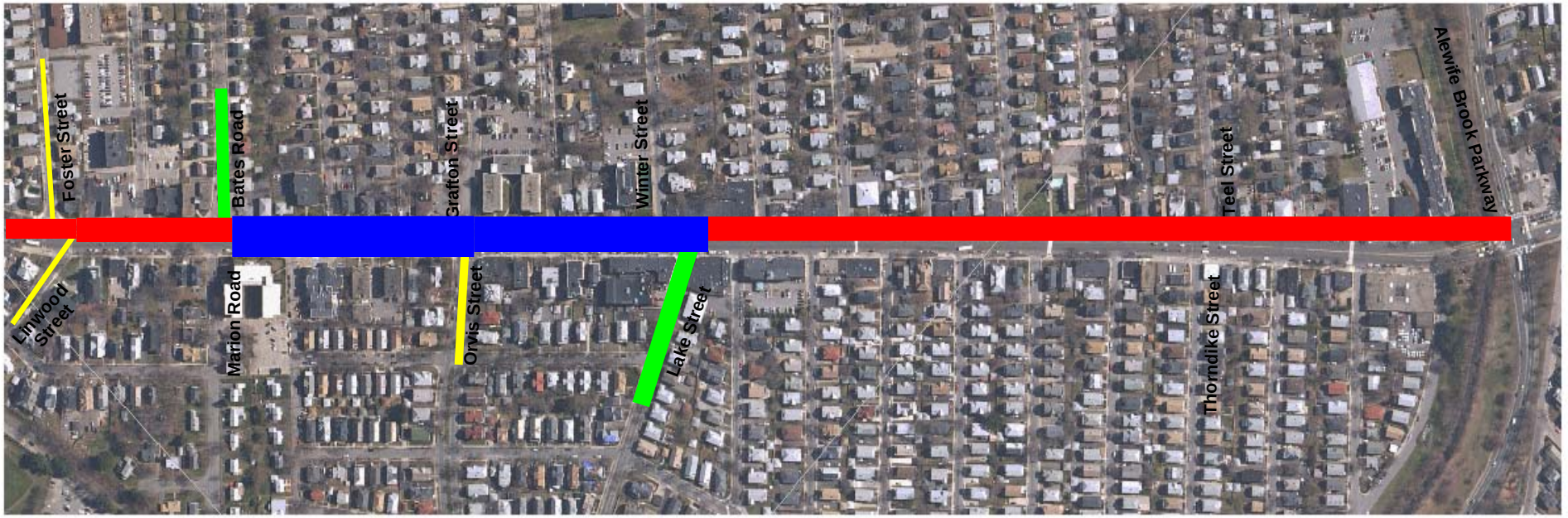
Existing

Build

Before and After 95% Vehicle Queues at Key Intersections

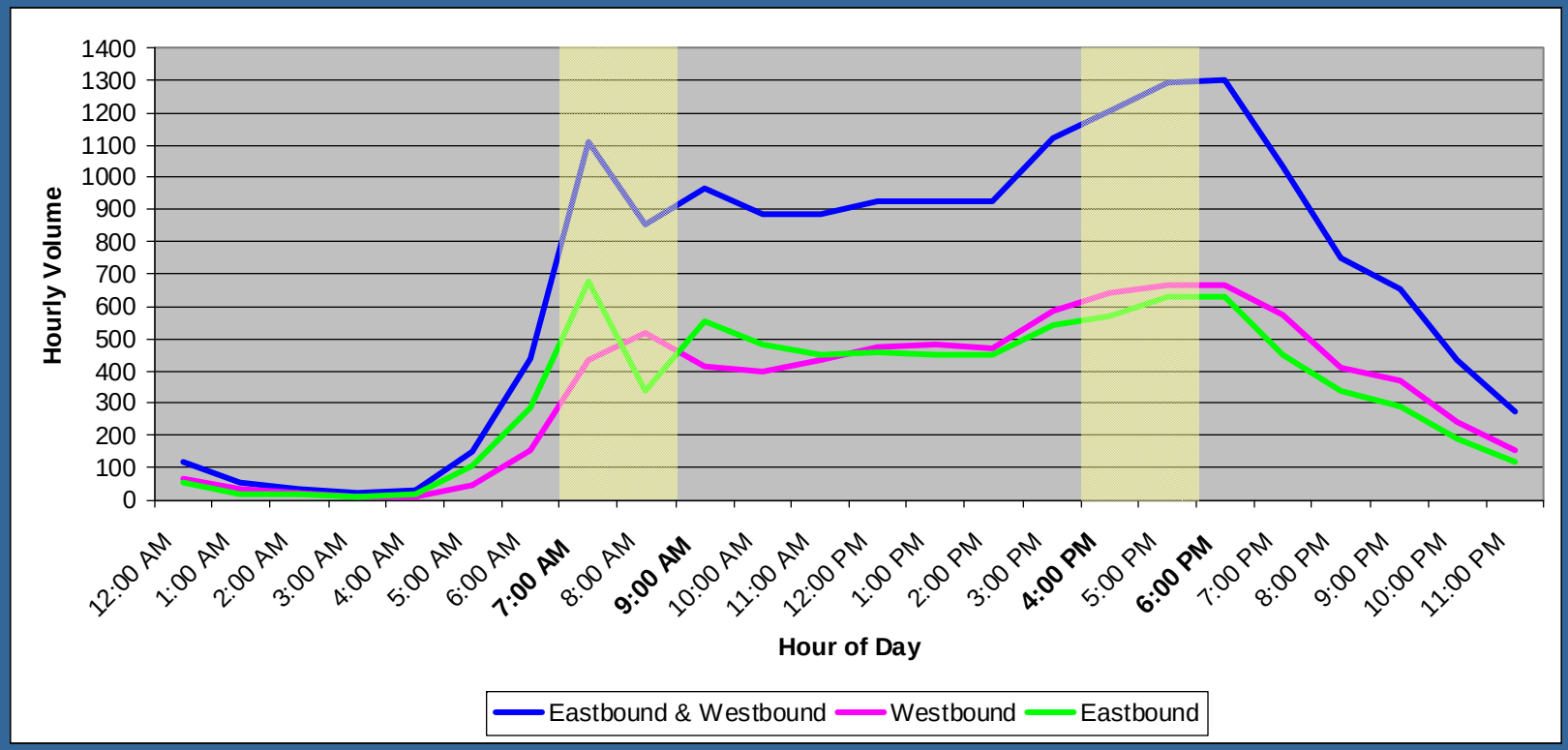
(AM Peak Period)

Traffic Volume Fluctuations
(AM Peak Period)



Mass Ave Hourly Variation

24 Hour Volume, East of Thorndike Street



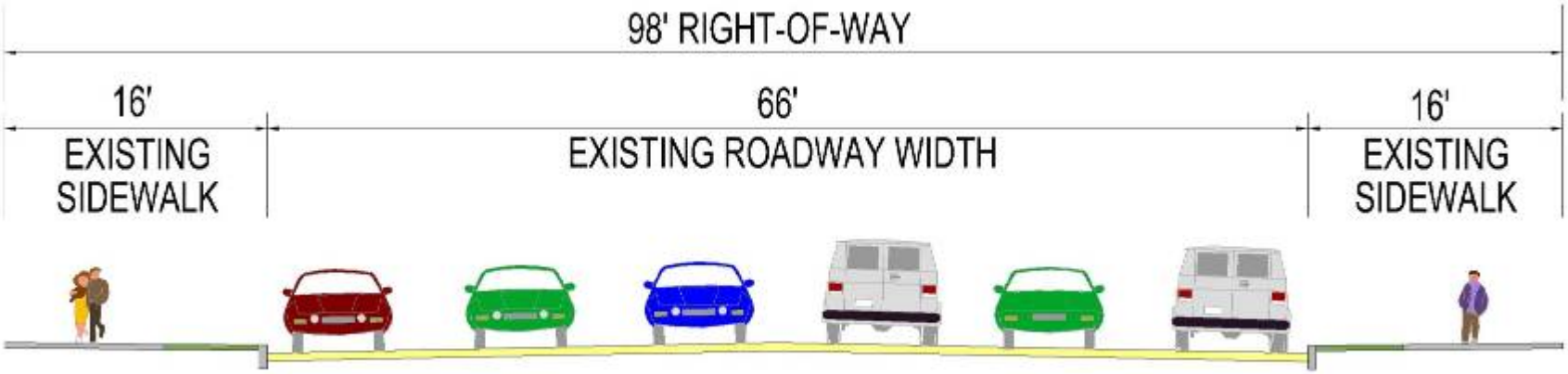
Proposed Project Improvements

- Provide balanced design for all users
- Better Organize use of roadway & reduce excess width >> **where not required**
- Pedestrian Crossing Times and Distance
  - Existing Roadway Width - 66-80 feet
    - Avg. crossing time = 20 – 25 seconds
  - Proposed Roadway Width – 40-45 feet
    - Avg. crossing time = 10 – 15 seconds

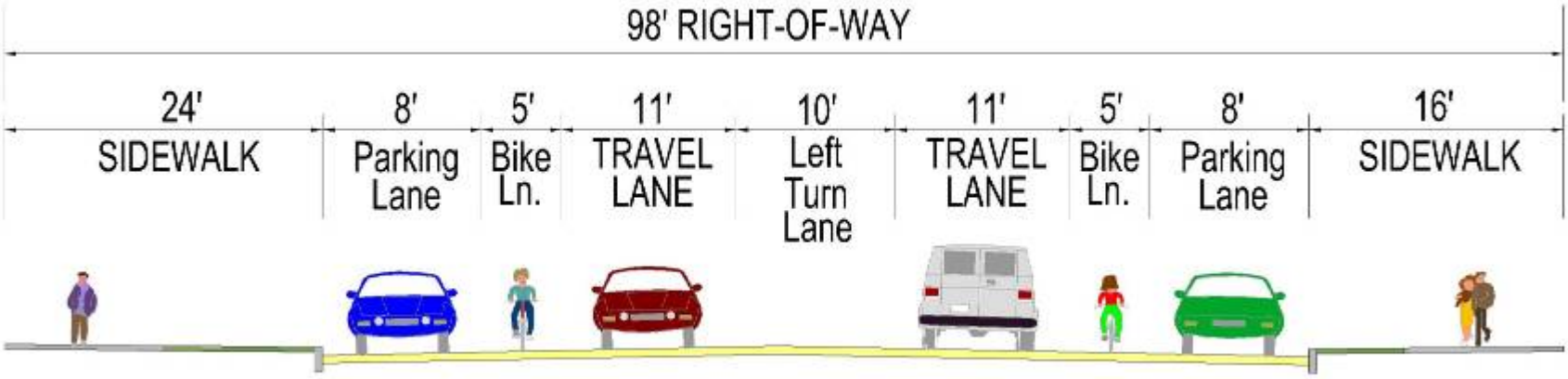
✳ Future 2018 volumes w/ Traffic Signal Improvements - Mass Ave does not need 2 lanes in each direction for the entire length

Typical 3-Lane Sections

EXISTING



PROPOSED



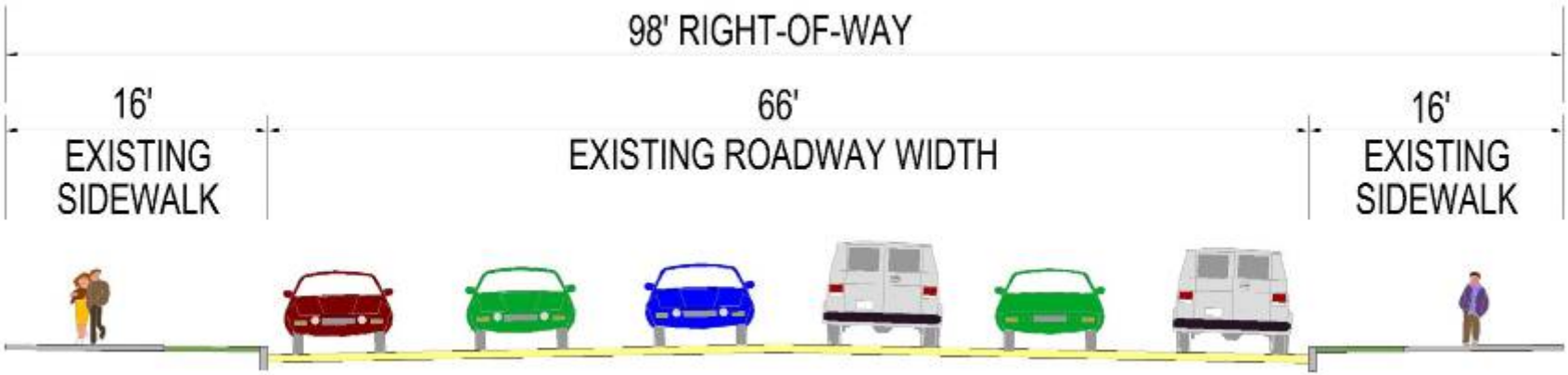
Proposed 3-Lane Section

Benefits

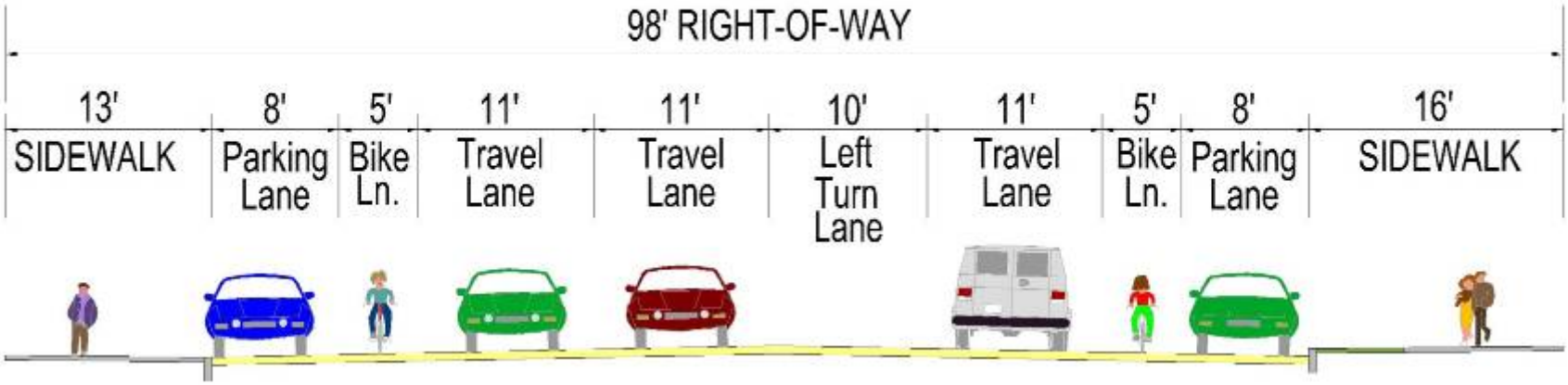
- Improved Pedestrian Safety
  - Shorter Crossings
- Traffic Calming
- Preserve (or widen) existing sidewalks
- Exclusive left turn lanes make easier & safer turns

Typical 4-Lane Sections

EXISTING



PROPOSED



Proposed 4-Lane Section

- Longer Pedestrian Crossings
- Roadway widening – take away from existing sidewalks
- Will lose existing street trees on at least one side
- Increased construction cost and duration to reset curb & narrow sidewalks

Examples – Lane Reductions

- Trapelo Road – Belmont, MA
- Concord Ave – Belmont, MA
- Concord Ave – Cambridge, MA
- Route 122 – Northbridge, MA
- Vanderbilt Avenue – Brooklyn, NY

Concord Ave - Cambridge, MA

(4 Lanes to 3 Lanes)

Route 122 – Northbridge, MA
(Roadway Narrowing)

Vanderbilt Avenue – Brooklyn, NY
(4 Lanes to 2 Lanes)

Construction

- Mass Ave Project is not like Summer Street
- Pavement Overlay (Not Full-Depth)
- Reset Curbing Where Necessary
- Reconstruct Sidewalks & Wheelchair Ramps
- Install Lights & Traffic Signals
- Plant New Landscaping

Sidewalk Construction

Sawcut Pavement and Sidewalk

Sidewalk Construction

Remove Curb

Sidewalk Construction

Reset Curb

Sidewalk Construction

Provide Path for Pedestrians

Sidewalk Construction

Pour Cement Sidewalks

Sidewalk Construction

Newly Formed Sidewalks

What can be done to minimize inconvenience during construction?

- Mass Ave will be open to traffic at all times
- No Traffic Detours
- Contractor shall maintain access to businesses at all times
- No Construction during Christmas shopping season
- Limit work zone
- Split project into phases
- Coordinate construction schedule with Town & post updates on Town website
- Construction signs to inform how to access businesses during construction

Massachusetts Ave. Corridor Project

Town of Arlington, Massachusetts

Design Objectives

- ✪ Improve Pedestrian safety and mobility.
- ✪ Improve cyclist safety and mobility.
- ✪ Improve the environment for transit users.
- ✪ Maintain motorist mobility.
- ✪ Minimize through traffic on local neighborhood streets.
- ✪ Create more orderly traffic flow.
- ✪ Improve access to local businesses.
- ✪ Enhance the streetscape.